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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE GP2711

A/F

Applicant:	Chakrabarti et al.	)	Art Unit: 2711
		)	
Serial No.:	08/947,221	)	Examiner: Le
		)	
Filed:	July 8, 1998	)	AM9-97-120
		)	
For:	METHOD AND SYSTEM FOR FILTERING OF	)	July 21, 2000
	INFORMATION ENTITIES	)	750 B STREET, Suite 3120
		)	San Diego, CA 92101
		)	

TRANSMITTAL LETTER FOR - SUPPLEMENTAL APPEAL BRIEF - APPEAL REINSTATED

Commissioner of Patents and Trademarks
Washington, DC 20231

Dear Sir:

    In connection with the above-referenced case, enclosed herewith are the following:

1.   A Transmittal Letter for - Supplemental Appeal Brief- Appeal Reinstated in one page with Cert. of Express Mailing;
2.   A Supplemental Appeal Brief in 7 pages, along with Appendix A in 4 pages, in triplicate;
3.   An Acknowledgment Postcard.

                             Respectfully submitted,

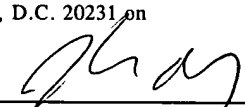   John L. Rogitz, Pat. Reg. No. 33,549
                         Attorney of Record
                         750 B Street, Suite 3120
                         San Diego, CA 92101
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		)	San Diego, CA 92101
		)	
		)	

SUPPLEMENTAL APPEAL BRIEF - APPEAL REINSTATED

Commissioner of Patents and Trademarks
Washington, DC 20231

Dear Sir:

Applicants request reinstatement of the appeal under MPEP §1208.02, in response to the Office

Action dated June 20, 2000.

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Group 2700

(1)   Real Party in Interest

The real party in interest is the assignee.

(2)   Related Appeals/Interferences

No other appeals or interferences exist which relate to the present application or appeal.

(3)   Status of Claims

Claims 1-13 are pending. All pending claims have been finally rejected, and the rejections of Claims 1-12 is hereby appealed. A copy of the claims is enclosed in the original brief as Appendix A and is incorporated herein by reference.

(4)   Status of Amendments

Since Claim 13 is not being appealed, Claim 13 is cancelled hereby. No amendments are outstanding.

(5)   Summary of Invention

The invention is a method for finding relationships between entities, and as specifically set forth in claim 1, between hyperlinked entities. Affinity values are obtained which include, for each entity, respective

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affinity values representing some affinity between the entity and each one of the other entities of the collection As set forth in claim 1, an affinity value can depend on a hyperlink, whereas Claim 12 recites that the affinity values are not constrained to be symmetric, as is the case with hyperlinks (they are non-symmetric).

The present method also includes initializing significance values for each of the entities, iteratively calculating updated significance values for each entity, based on the affinities and on the significance values prior to the iterative update, until a predetermined condition is reached, and then obtaining the useful information based on the significance values after the final iteration.

(6)   Issues

(a)   Whether Claim 1 is unpatentable under 35 U.S.C. §103 as being obvious in light of Deerwester in view of the Microsoft dictionary ("Microsoft").

(b)   Whether Claim 12 is unpatentable under 35 U.S.C. §102 as being anticipated by Shoham.

(7)   Grouping of Claims

Claims 1-11 are grouped together. Claim 12 is grouped separately from all other claims. This is because Claim 1 is expressly limited to hyperlinked documents, whereas Claim 12 is limited to respective distinctive features of hyperlinked documents (asymmetricity) that nonetheless can apply to non-hyperlinked but otherwise referenced documents, unlike Claim 1. Indeed, the two independent claims have been rejected based on different references. Consequently, allowing one of the independent claims to fall if the other

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claim's rejection were to be sustained would be to effectively allow one of the claims to stand rejected on a

reference argues neither by the examiner nor Applicants, and would thus be inappropriate.

(8)(a) Argument

Claim 1 has been rejected as being obvious in light of Deerwester, which relates non-hyperlinked

documents together and which nowhere appears to mention hyperlinks, in light of Microsoft, used simply as

a teaching that hyperlinks are equivalent to URLs.

What has happened in this second go-round is that the examiner has noted that Deerwester mentions

URLs, then equates URLs with hyperlinks on the basis of Microsoft, and then believes that the present claims

have been arrived at. They have not been. What is still glaringly deficient in the present prima facie case

is a showing of where, how, and why Deerwester might be modified to do something it doesn't teach,

namely, making its reference values depend on hyperlinks, as required by Claim 1.

Specifically, the lack of suggestion in Deerwester to use hyperlinks in a document-relating context

is not cured by Microsoft, in that the dictionary has been used only to equate hyperlinks with URLs without

first showing where Deerwester uses URLs as a basis for finding its relevance values. The examiner has

cited a portion of Deerwester that mentions URLs - but not in the context of relevance values! Rather, the

relied-upon section of Deerwester (col. 10, lines 26-37) mentions URLs *but in a context and for a purpose*

that is distinct from its affinity values, namely, to create objects and name agents (see col. 12, lines 64-65).

Thus, the logical breakdown of the present rejections is laid bare. Deerwester remains fixed on finding

relevance values using term similarity, not references (such as hyperlinks) from one document to another.

Just because Deerwester happens to mention how to use URLs to create objects and name agents consequently

is irrelevant to whether a claim that requires basing affinity values on hyperlinks is patentable.

Applicants repeat their previous observation that **actual evidence** of the relied-upon suggestion is

required, and "broad conclusory statements regarding the teaching of multiple references, standing alone, are

not evidence". In re Dembiczak, 175 F.3D 994, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999). As set forth in

Dembiczak, "the best defense against the subtle but powerful attraction of hindsight-based obviousness

analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine

prior art references", Id. at 999, 50 U.S.P.Q.2d at 1617. Dembiczak's "actual evidence" requirement has

just been extensively cited by the CAFC in reversing a Board determination of obviousness in precedential

case no. 99-1231, In re Kotzab (July, 2000).

With this fundamental legal guidance in mind, the examiner has failed to identify a prior art

suggestion to modify Deerwester in some unknown, unproposed way such that the affinity values would

depend on hyperlinks. Deerwester is directed to database mining by identifying associations between terms

of documents, as set forth in the background of Deerwester. The algorithm of Deerwester thus depends on

terms; how it could use non-term references such as hyperlinks is a mystery. Indeed, in both the final

rejection and Advisory Action the examiner admits that hyperlinks are references from one document to

another, and accordingly are, per this admission, independent of terms in the documents.

Nothing in Deerwester appears to motivate relating documents by anything other than common terms.

Certainly, Deerwester's method depends on terms, and would lack the input it requires if hyperlinks were

used instead of terms. It would thus appear that inputting hyperlinks into Deerwester would result in an

output that does not make sense, thus rendering Deerwester unsuitable for its intended purpose, a modification

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that accordingly is contrary to MPEP §2143.01 (Citing In re Gordon). Consequently, nothing in Deerwester appears to provide the impetus to relate documents by references to each other.

Applicants' position is bolstered by Deerwester itself. Specifically, col. 8, line 65 to col. 9, line 5 of Deerwester appears to be the only place in Deerwester that mentions the Internet, yet nothing in this short paragraph refers to "hyperlinks" or "URLs". It accordingly would seem most difficult to find a suggestion in Deerwester to gut its algorithm of its central theme - term affinity - and replace it with another protocol, namely, affinity as evidenced by hyperlinks (which are references, not terms), when Deerwester itself does not mention "hyperlinks" when it addresses Internet data mining using term affinity.

(8)(b)   Argument

Independent Claim 12 has been rejected as being anticipated by Shoham, on the ground that Figure 2 of Shoham shows a directed graph. Indeed it does - but no values in Shoham appear to be derived from this or any other asymmetric entity, as is otherwise required by Claim 12. The examiner essentially has shown only that something asymmetric exists in Shoham, but altogether fails to allege that Shoham bases affinity values on it. It thus seems a waste of time to even argue a point that has not been made.
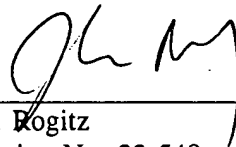
Since the examiner seems blithely unconcerned about what Shoham bases its "metrics" on, Applicants will provide the Board with an explanation. At col. 9, line 57 continuing to col. 10, line 9, Shoham teaches that features of resources are extracted and used to evaluate search heuristics that use "metrics". What are these "metrics"? According to Shoham, they are based on term frequency and document frequency (col. 10, lines 5-7). They can also be based on document length, number of pictures it contains, and when it was last updated. Words in HTML tags can be rated highly, col. 10, lines 26-34, *but nowhere does Shoham teach*

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using asymmetric values such as hyperlinks or other references between documents as metrics against which

its heuristics can be evaluated.   Plainly, Shoham neither teaches nor suggests Claim 12.

Respectfully submitted,

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JLR:jg

APPENDIX A

1.   A method for eliciting information, useful to a user, from first and second collections of entities or resources with explicit and/or implicit, static and/or dynamic relations therebetween, the method comprising the acts of:

obtaining the first collection of entities and the second collection of entities, hyperlinks being established between at least some of the entities;

obtaining affinity values, including, for each given one of the entities, a respective affinity value for the given entity and each respective one of the other entities of the collection, whereby at least one affinity value depends at least in part on at least one hyperlink;

initializing significance values for each of the entities; [and]

iteratively calculating updated significance values for each entity, based on the affinities and on the significance values prior to the iterative update, until a predetermined condition is reached; and

obtaining the useful information based on the significance values after the final iteration of the act of iteratively calculating.

2. A method as recited in claim 1, wherein the step of obtaining affinity values includes obtaining, for each one of the given entities in the first collection, a respective affinity value for the given entity and each respective one of the entities in the second collection.

3. A method as recited in claim 1, wherein the step of obtaining first and second sets of entities includes obtaining a single set of entities as both the first set and the second set.

1   4. A method as recited in claim 3, wherein the step of obtaining affinity

2   values includes obtaining, for each one of the given entities in the single set of

3   entities, a respective affinity value for the given entity and each respective other

4   one of the entities in the single set.

1   5. A method as recited in claim 1, wherein the step of obtaining affinity

2   values includes the steps of:

3   obtaining a set of raw affinity values; and

4   deriving a set of derived affinity values from the raw affinity values.

1   6. A method as recited in claim 5, wherein the step of deriving derived

2   affinity values includes using one of:

3   a sum operation,

4   an average operation,

5   a min operation,

6   a max operation, and

7   a linear combination.

1   7. A method as recited in claim 1, wherein:

2   the method further includes the step of computing similarity values between

3   the entities based on the affinity values; and

4   the step of iteratively calculating updated significance values includes

5   iteratively calculating updated significance values based on the affinities and on the

6   significance values.

1   8. A method as recited in claim 7, further comprising the step of iteratively

2   calculating a updated principal affinity component value for each entity of interest

3   based on the affinities and similarities.

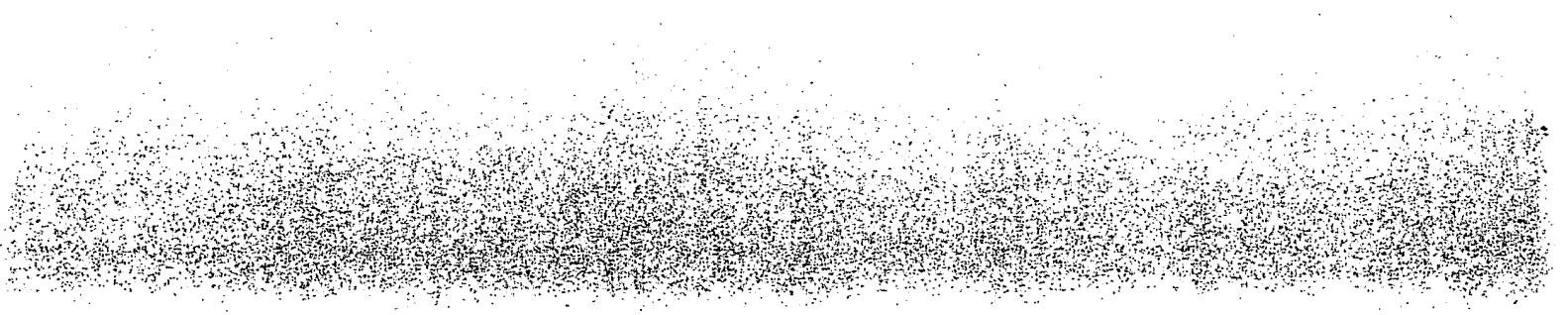1   9. A method as recited in claim 8, wherein:

2   the step of computing similarity values includes computing a similarity matrix;

3   and

4   the step of iteratively calculating a updated principal affinity component value

5   includes calculating a non-principal eigenvector of the similarity matrix.

1   10. A method as recited in claim 8, wherein the step of obtaining the useful

2   information includes obtaining the useful information based on the updated principal

3   affinity component values.

1   11. A method as recited in claim 10, wherein the step of obtaining the useful

2   information based on the updated principal affinity component values includes

3   obtaining a cluster.

12.   A method for eliciting information, useful to a user, from first and second collections of entities or resources with explicit and/or implicit, static and/or dynamic relations therebetween, the method comprising the acts of:

obtaining the first collection of entities and the second collection of entities;

obtaining affinity values, including, for each given one of the entities, a respective affinity value for the given entity and each respective one of the other entities of the collection, the affinity values not being constrained to be symmetric;

initializing significance values for each of the entities;

iteratively calculating updated significance values for each entity, based on the affinities and on the significance values prior to the iterative update, until a predetermined condition is reached; and

obtaining the useful information based on the significance values after the final iteration of the act of iteratively calculating.